Pilot Joe Scoping Comment:

The Pilot Joe Project has been touted as a collaborative forest restoration project designed to address issues of forest health, resilience, composition, and density in the dry forest communities of the Middle Applegate drainage. I believe the collaborative nature of the project is a significant step, towards incorporating public input and concerns into landscape forest management projects in the area. I also believe that the ecological emphasis of the project is a positive development towards creating a more appropriate and holistic form of restorative management on federal lands. Having said this I also believe the project has been tainted by timber bias and the desire to extract timber resources from federal lands, at the expense of other important values and resources. "The mark" although somewhat ecologically driven has been developed within the framework of the defunct timber sale known as "China/Keeler", yet focuses more narrowly on timber stands and areas capable of timber production. Much of the acreage originally proposed for treatment under the China/Keeler Timber Sale has been excluded from the current Pilot Joe project area, mainly consisting of those acres without a timber component. Vast acreages proposed for fuel reduction in the original China/Keeler project are not currently included in the restoration efforts despite the need for restoration of "non-forest" communities and the close location of these fuel choked areas to populated areas. Essentially what is being offered are the most forested timber stands outside of existing Spotted Owl cores.

The area proposed for treatment lies entirely within the Chapman and Keeler Creek Watersheds, at the northern edge of a ridge system providing connectivity for forest dwelling wildlife species between the Applegate Valley and the Siskiyou Crest. The nature of this ridge system tends to support more forest, with better connectivity than the more arid ridge system to the east and across the Applegate River. Much of this ridge system supports forest ecosystems and vegetative cover that facilitates dispersal for late seral species such as the Northern Spotted Owl, the Pacific Fisher, and other, forest dwelling species. The pattern of north and south exposures in the area is less harsh and dramatic than in much of the Applegate drainage. Generally lacking the large grassy balds and mid slope chaparral habitat so abundant in the mountains of the Applegate, the area provides refugia and connectivity, that may allow for the dispersal of forest dwellers across the landscape, a key function of recovery for species such as the northern spotted owl. Because of this unique and vital habitat feature and the role it provides on the landscape scale, care must be taken to retain adequate forest cover to accomodate for the roosting, foraging, and nesting habitat of the northern spotted owl. Structural complexity should be retained while undertaking density reduction thinning in the area. This includes the retention of standing snags, interlocking canopies, denser forest patches within treated areas (and outside of the proposed "skips"), hardwood species, and a wide variety of stand structures in thinning units.

To truly achieve restorative results within the treatment areas includes far more than reducing stand densities and aggressively opening forest canopies. If the goal of this project is ecosystem restoration, than I believe the bar must be raised throughout the process, from planning, marking, prescription development, and into implementation. In the past, agency projects have often suffered from poor implementation and quality control. The goal of this project, although undertaken on a

landscape scale should be to attain a higher standard of quality and innovation than in past projects, and to monitor for effectiveness and integrity of implementation. Forest restoration is not simply a structural state, but a holistic approach incorporating and balancing a wide variety of values, including structural conditions, forest composition, wildlife issues and habitat, noxious weed mitigation, the needs of rare or endangered species (both floral and faunal), and forest resilience. Issues of fuel reduction and structural concerns should not over ride other values as in past treatments, creating short sighted, tunnel vision fuel reduction and timber extraction projects that only lead to further problems in ecosystem function and health. We have managed our forests in the past for narrow objectives and now must broaden the perspective, especially if we are to claim a truly restorative approach. To continue down the road of narrowly focused treatments is a massive lost opportunity, a co-option of restoration forestry and its principals, and waste of tax payer money. It is time for a new era in federal land management, one that strives to achieve multiple objectives, while not allowing a single objective (timber or fuels) to outweigh other important values and objectives.

LSEA areas:

The identification of Late Successional Emphasis Areas (LSEA's) within the project area is a productive and necessary step towards protecting existing spotted owl cores, undisturbed dense forest structure, and canopy conditions conducive to the habitat needs of the spotted owl and other late seral species. The approach of strategically retaining density in areas known to be utilized by the spotted owl is commendable. Yet, I am concerned that the LSEA's have no official protection or designation that would guide the management of such areas in the long term, for late successional characteristics. The areas were simply delineated on a map and reserved from timber harvest during the current planning effort. The delineation of such areas does not represent any meaningful protection of late successional values and does not have any real implications for future management. LSEA's should be withdrawn from commercial harvest until treated areas outside of LSEA habitat have become suitable for spotted owl nesting, foraging, and roosting as we are being told they will. As conditions outside of LSEA habitat develop into suitable owl habitat, the option of commercial treatment within LSEA habitat could be re-evaluated. This could take at least 20-50 years. Potentially, LSEA's could be added to the agencies LSR system and managed for late seral conditions.

If the delineation of LSEA areas is to be evaluated in the EA's environmental analysis of and/or seen as a form of mitigating or reducing cumulative impacts then the LSEA's must be granted real protections including clear management guidelines emphasizing dense, structurally complex forest conditions. Likewise, the agency should manage areas adjacent to and between LSEA's in a way that provides connectivity between LSEA habitat. This may include the retention of relatively high canopy closure's, snag habitat, structural complexity, decadence, downed wood, interlocking canopies, occasionally small canopy gaps,and other late seral conditions. Dense brush could also be retained in some locations to provide for prey habitat for the dusky footed woodrat. Likewise, small gaps could be created to encourage some early seral conditions allowing woodrat habitat to persist into the future.

General Recommedations & Concerns:

- Consider a multiple entry approach throughout the treatment area to reduce sunscald, windthrow, insect outbreaks, drying, and shock associated with drastic alterations in micro-climate conditions. Low vigor douglas fir and madrone of all age classes are particularly susceptible to such impacts. Many of the large old trees, (especially fir trees) targeted for retention have low crown ratio's, low vigor, poor growth rates, and a variety of insect, disease, and fungal pests present, making long term survival uncertain. Retaining slightly more trees on site allows for a certain amount of mortality within treated areas, ensuring adequate forest cover, creating more options for future treatment, and allowing the agency to track a stands response to treatment and adapt to the developing conditions. According to research conducted by Tom Atzet, douglas fir trees can take up to 7 years to show the signs of "release" thus a return interval on thinning treatments of 7-15 years would be recommended. Likewise, the agency may consider performing prescribed burning treatments on a similar return interval (or longer) to allow currently low vigor trees to respond to "release" before adding the stress of fire to the stand. If the goal is to retain and encourage vigor in large, old trees a long term, phased approach may be beneficial.
- Although the agency has targeted many large, old snags and hardwood trees for retention within the treatment area, the ability to preserve such structural features may be difficult during commercial logging operations. Many snags will undoubtedly be felled as "hazard" or "safety" trees due to OSHA standards and industry practice. Likewise, the potential for substantial damage to large hardwoods and snags during both felling and yarding operations is high. Many hardwoods will be felled to facilitate safe and effective felling of commercial trees. Low lying limbs and small to medium sized trees will be damaged or broken during felling operations, and damage to bowels will likely occur during yarding operations. My confidence in agency claims that both snags and high value hardwoods will be both retained and encouraged is extremely low. Mitigation measures and monitoring protocol must address these issues. Attempts should be made to accommodate retention by utilizing skips to protect high value hardwood and snag features. Yarding routes should be created to reduce damage to these values. Commercial timber may have to be directionally felled or jacked to achieve the desired results.

  Lastly, environmental analysis of the project must be realistic when evaluating the impacts of the project on snags and hardwood species. The analysis must not be based on fantasy but operational realities. Restoration should include extra efforts to ensure retention and to encourage conditions conducive to long term. The success of such efforts should be closely monitored to track compliance.
- Develop a maintenance schedule and strategy for post treatment as part of the EA. Restoration is a process of land stewardship and natural change, not a single, static action. The agency should emphasize prescribed fire as a maintenance tool to reduce soil impacts and the impacts on residual trees associated with future logging operations. If restoration is the goal, natural process should be emphasized wherever possible.
- Require rigorous multi-party monitoring into long and short term impacts as well as implementation effectiveness and compliance with restoration principals to assess project

effectiveness and success. Integrate findings into treatments in an adaptive management approach. Create protocol and objectives to be met and monitor to track compliance.

- Require the disposal of all slash generated through treatment. Piles should be burned within one year of treatment to reduce fuel risks associated with hand piling.

Specific Recommendations:

Unit 1-3A

I have concerns regarding the canopy closure and structural diversity in the stand post treatment, including the implication for spotted owls, pacific fisher, and other late seral species and their habitat needs. The unit is relatively productive and low on the landscape making utilization by late seral species likely. The canopy conditions will likely be quite low for these species after treatment, negatively effecting utilization by such species.

The goal of encouraging hardwood habitat(namely oak) in the stand is appreciated, yet somewhat misguided. I would not recommend cutting to heavy from the stands oak component , but do not believe cutting large, fairly well spaced fir to “release” oak is appropriate given the slope position and aspect of the stand. I do not believe the oaks will respond as Norm and Jerry have stated, with substantially increased vigor or acorn production. Such treatments may encourage a strong brush response and increase fuel over time. I also question the need to diversify the forest so aggressively on the stand level, on this site. I would argue that spatially much of the Applegate is divided into plant communities by a combination of aspect, slope position, and disturbance history. Diversity can be encouraged in these stands by encouraging, retaining and releasing large pine and hardwoods, but I'm not sure the "gaps" we saw will really produce vigorous pine reproduction, nor will the spacing on the firs’ post treatment allow for pine reproduction. On the contrary I believe you will get lots of fir reproduction and in fill, creating ladder fuels. More canopy retention would reduce fir reproduction and brush response due to treatments Gaps should be focused on young low vigor stands, with some retention of targeted species such as pine, cedar, oak, and occasionally understory brush. Stands should be thinned to reduce density and increase resilience, but should not undergo type conversion from fir forest to woodland.

It is more appropriate to express diversity in the larger landscape mosaic, managing plant communities rather than engineering them, working with the patterns of slope position and aspect rather than fighting them. The area is clearly a doug fir stand, on a north slope and low on the landscape. On north slopes we should free up old pines where we find them, yet allow for the development of relatively open fir stands. Pine communities should be restored on more productive pine sites, such as on ridges, south faces, and in oak openings were we will see better results. Oak management would be similar, managing for oak on north aspects and lower slope positions seems somewhat misplaced, plenty of oak ground could be restored on south slopes, on ridges, and in residual oak openings. Again large old oaks and other important

oak habitat should be retained and nurtured to a certain extent in the treatment area, but I am not sure if oak management in the proposed treatment area will be sustainable long term.

I also find the mark in the unit to be somewhat uniform and homogenized. It appears to create fairly uniform open conditions and simplified stand structures, excluding the required riparian buffers. It also appears timber driven rather than restoration driven. Why was this site chosen as a priority? Does it have to do with the relatively large concentration of commercially valuable trees or restoration needs? I am afraid especially with timber prices as they are, that to make the project "economically viable" the agency is going to sacrifice far too much ecologically. I am also concerned that the economic conditions will force the agency to cut hard yet not really generate much $ to fund non commercial treatments, making the situation lose, lose.

Unit 32-1 & 32-4A:

The mark in this unit is quite "clustered", I like that it did not break up clumps or groupings of trees, but did thin around them. Opening the stand seems appropriate given the slope position and aspect, although I would worry about windthrow, sun scald, drought induced insect infestation, drying winds, and other forms of "shock" to the stand, especially to its large douglas fir. Drastic micro climate changes could very easily impact the stands numerous old, low vigor trees. In many situations the shock of heavy thinning can be detrimental to low vigor trees, these are the very trees targeted for retention and restoration according to restoration principals. Given the relative lack of large mature trees in the watershed great care should be taken to ensure their survival. It may be necessary to implement a multiple entry approach to mitigate these effects. It may also be beneficial to retain a few extra young trees in case you see impacts to the older trees. If all goes well they could be removed at a later date. The key is to manage for resilience and keep your options open for the future.

That said, I like the retention of hardwoods in the unit and do believe they need some space to thrive. Yet, I worry many will be negatively impacted during the felling and yarding operations. The potential for breaking large branches, stripping the bark, and impacting the crowns of large old hardwood trees will be difficult to avoid given the commercial operations proposed. A high priority in the treatment is to nurture large old hardwood trees. Care should be taken to avoid negative impacts associated with logging on site.

I also worry that the planned "skips" which represent fairly intact oak woodlands and high habitat values will either be greatly compromised by yarding and/or felling on site. Under no circumstance should skips be yarded thru. The agency seems open to redesigning "skips" to more easily accommodate yarding operations, I feel this would be a mistake and is an example of commercial interests trumping ecological needs and restoration principals. Norm and Jerry

clearly stated that the redesigning of these skips to provide yarding access was contrary to their vision and prescription. They stated that some commercial trees may have to be sacrificed to accommodate the skips.

It seems the difficulty of yarding on the site and the "temporary road" proposed could cause problems. I worry about weeds this high on the slope with yarding scars and a new section of road. I also worry that the BLM will be unable to truly put the road to bed if OHV users find it further risking weed spread. OHV riders love making ridgeline use routes. I would recommend making every effort to retain the survey and manage species found in the area of the proposed road as well as all old growth trees. If the road can be developed around these features it may be acceptable. If not the unit and the road may have to be excluded from the project.

Unit 31-3A:

It appears as though a few portions of this unit need refining to accommodate a more clustered stand structure and to retain the largest most vigorous trees. In many places the mark is fairly uniform and evenly spaced. During the recent field trip Norm stated that the unit needed some re-evaluation to be consistent with restoration principals. The stand is mostly mature douglas fir forest with a substantial component of large open branching madrone. All large madrone must be retained and protected from felling and yarding impacts. Some directional felling may be necessary. Slightly more dense stand conditions should be allowed to persist in the draws allowing for some interlocking canopies and variable retention management. Yarding routes should avoid these draws and possibly “skips” should be designed to overlap with the draws to allow for more dense conditions. The unit provides connectivity between LSEA’s and should be treated to allow for the dispersal of late seral species.

Unit 31-4A:

The unit contains a substantial pine component and should be managed to retain and encourage the development of pine habitat conditions. Oaks and other hardwoods should also be retained. The current mark looked promising and should be heavy enough to encourage sustainable conditions for the release of pine species. The road development proposed to accommodate tractor yarding should be abandoned and the unit cable yarded thru unit 31-3A. Cable yarding would reduce soil disturbance and compaction from 12% to 4% of the stand reducing the likelihood of noxious weed spread and soil impacts. This is of concern due to the open conditions (post treatment) and the proximity of oak woodlands where weeds can spread readily. Likewise, the proposed road construction has the potential to impact Chapman Creek a key Coho watershed due to road reconstruction and the impact of constructing a temporary bridge. Tractor yarding in the unit also has the potential to create detrimental compaction

reducing the vigor and/or survival of leave trees. Yarding routes should be designed to reduce impacts to leave trees on site.

Unit 1-1:

A few large, relatively open grown douglas fir are marked in this unit that cannot be justified. The stand is very heterogeneous and diverse with a substantial hardwood component. Efforts should be made to reduce impacts to hardwood species when felling and yarding material in the treatment area. For the most part the mark is reasonable although some refinement may be needed. Numerous understory trees are marked for retention that represent ladder fuel and competition for larger overstory trees. Likewise, a handful of large overstory trees are marked for removal creating the potential for a vigorous brush response. Norm and Jerry outline brush response as a concern in their restoration principals stating that such a response can increase fuels and complicate maintenance.

Unit 32-4B:

Many of the trees marked for retention in this unit are low vigor and sensitive to shock due to significant microclimate alterations. A more conservative, multiple entry approach may be necessary to reduce such impacts.

Units 27-1:

This unit should be entirely dropped from consideration due to the current stand conditions. Norm and Jerry have clearly shown a lack of support for this unit and do not consider proposed treatments as consistent with restoration principals. The proposed road should also be canceled. The unit should be included within a LSEA at the north west corner of the planning area.

Unit 34-2:

This unit should be entirely dropped from consideration due to the current stand conditions. Norm and Jerry have clearly shown a lack of support for this unit and do not consider proposed treatments as consistent with restoration principals. The proposed road should also be canceled. The unit should be included within a LSEA.

Thank you very much,

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